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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/533,831
Filing Date: November 10, 2005
Appellant(s): HUSEMANN ET AL.

Mark D. Marin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 11/08/2010 appealing from the Office action mailed 3/4/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1 and 3-16.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

US 5,252,395	Maruoka et al.	10-1993
US 6,293,037 B1	Spada et al.	09-2000
US 6,365,793B1	McLaughlin et al.	04-2002
US 5,194,455	Massow et al.	03-1993
WO 98/24978	Khieu et al.	06-1998
US 5,612,136	Everaerts et al.	03-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. **Claims 1, 3, 4, 6, 7, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,293,037 B1) and McLaughlin et al. (US 6,365,793B1)**.

2. With respect to claim 1, Maruoka discloses a pressure sensitive adhesive sheet comprising a substrate and a layer of pressure sensitive adhesive composition coated on the substrate (abstract). The PSA of Maruoka is formed of copolymer comprising (A) 30 to 93 weight percent of monomeric unit of acrylic ester, wherein acrylic ester is an ester of acrylic acid or methacrylic acid with an alcohol having 1 to 14 carbon atoms (equated to read on applicant's monomer (a) as claimed) such as n-butyl acrylate and 2-ethylhexyl acrylate (column 3 lines 35-40 and column 5 lines 5-20), (B) a polar acrylic monomer, and (C) a high Tg macromonomer having Tg of 20°C or more (column 5 lines 40-65). Additionally, Maruoka discloses that the copolymer of his invention has Tg in the range of -60°C to 60°C (column 8 lines 50-55), which meets claim requirement of PSA having Tg of greater than or equal to 30°C.

3. As high Tg macromonomer (C), Maruoka discloses list of monomers including isobornyl acrylate (see column 5 line 59). It is noted that Maruoka is silent as to specifically using isobornyl acrylate

4. However, Spada discloses acrylic PSA tape that comprises 9 to 40% by weight of isobornyl acrylate and 50 to 91% by weight of one or more of alkyl acrylate (abstract). Further, at column 3 lines 15-25, Spada discloses isobornyl acrylate (IBOA) is a high

boiling, low odor, low toxicity monomer and preferred PSAs are made using between about 20 to 30% by weight of IBOA, based on the total weight of the monomers. Additionally, Spada discloses that IBOA forms a homopolymer having a high glass transition temperature (Tg = 94°C) (column 3 lines 15-25).

5. The aforementioned disclosure of Spada is interpreted to meet applicant's claim requirement of 10 to 40% by weight of isobornyl acrylate unit (claim 1) and 15 to 40% by weight of component (b) (i.e. isobornyl acrylate) (claim 11) as claimed.

6. Maruoka desires a high Tg monomer (Tg of greater than 20°C) that is used in acrylic copolymer of the invention which also includes isobornyl acrylate as one of the possible monomers. While Maruoka does not provide specific reason to select isobornyl acrylate, Spada discloses isobornyl acrylate that has low odor and low toxicity and whose homopolymer has high Tg.

7. **Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the isobornyl acrylate in the amount as taught by Spada in the invention of Maruoka, because isobornyl acrylate has low odor and low toxicity, and high Tg, which is desirable by Maruoka**.

8. As to claim limitation of teaching aluminum (III) acetylacetonate crosslinker, while Maruoka at column 10 lines 33-34 discloses "Agents to crosslink the adhesive

composition may also be added to the composition according to desire", Maruoka is silent as to teaching aluminum (III) acetylacetonate crosslinker.

9. However, McLaughlin discloses a PSA tape. Further, at column 7 lines 5-10, McLaughlin discloses a thermally crosslinked acrylic adhesive that includes metal chelate such as aluminum acetylacetonate.

10. **Based on the above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add aluminum (III) acetylacetonate crosslinker as taught by McLaughlin in the acrylic PSA of Maruoka as modified by Spada, motivated by the desire to provide PSA with suitable cohesiveness, and given that Maruoka desires crosslinkers**.

11. With respect to the claimed property of PSA having bond strength on steel, it is submitted that the PSAs of Maruoka as modified by Spada and McLaughlin and applicant comprise polymer formed of monomers (a) and (b) and aluminum (III) acetylacetonate. Based on this, the PSAs of Maruoka as modified by Spada and McLaughlin and applicant are structurally and compositionally equivalent to those presently claimed. Thus the aforementioned property would necessarily be present in the PSA of Maruoka as modified by Spada and McLaughlin.

12. With respect to claim 3, at column 5 lines 25-40, Maruoka discloses polar acrylic monomer (B) in the amount of 1 to 30 weight percent (column 3 lines 35-40) such as 2-hydroxyethyl (meth)acrylate, glycidyl (meth)acrylate etc. which read on claim 3.

13. With respect to claims 4 and 12, as previously noted PSA of Maruoka is formed of copolymer comprising (A) 30 to 93 weight percent of monomeric unit of acrylic ester, wherein acrylic ester is an ester of acrylic acid or methacrylic acid with an alcohol having 1 to 14 carbon atoms (column 5 lines 5-20), which meets said claims.

14. Regarding claim 6, Maruoka discloses that "Agents to prevent degradation such as ultraviolet absorbents and antioxidants may be added to the adhesive composition" (column 10 lines 30-35), which is interpreted to read on fillers and aging inhibitors of claim 6.

15. Regarding claims 7 and 9, Maruoka discloses an adhesive, wherein the adhesive is applied to substrates such as PVC, PE, PP, non-woven fabric, and woven fabric (column 10 lines 35-40).

16. **Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,239,037 B1) and McLaughlin et al. (US 6,365,793B1) as applied to claims 1 and 7 above, and further in view of Massow et al. (US 5,194,455)**.

17. Maruoka as modified by Spada and McLaughlin is silent as to teaching claims 8 and 16.

18. However, Massow discloses acrylate based hot melt adhesive. Additionally, at column 6 lines 30-40, Massow discloses that the thickness of the adhesive layer, depending on the intended use is between 5 to 1500 µm.

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the PSA layer of Maruoka with the thickness as taught by Massow, motivated by the desire to form a PSA tape that has a suitable thickness so that it can be applied to the intended substrates.

20. **Claims 5 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,239,037 B1) and McLaughlin et al. (US 6,365,793B1) as applied to claim 1 above, and further in view of Khieu et al. (WO 98/24978)**.

21. Maruoka as modified by Spada and McLaughlin is silent as to teaching claims 5, and 13-15.

22. However, Khieu discloses that PSAs have been used in durable pavement marking tapes (page 1 lines 20-25). With respect to claims 5, 14, and 15, Khieu discloses that PSA of his invention contains tackifiers in the amount ranging from 10 to 60% by weight in order to provide adhesive the necessary forming and bond

maintenance properties (page 8 lines 10-25). Additionally, at page 5 lines 10-15, Khieu discloses PSA comprising about 10 to 25% by weight tackifer. Further, at page 9 lines 4-7, Khieu discloses compatible tackifiers (see "The resin may be hydrogenated if desired for improved stability and/or ***compatibility***"). Alternatively, since Khieu discloses using hydrocarbon resin tackifiers (page 8 line 14) which are the same as those used in the present invention, the tackifiers would therefore intrinsically be compatible with the polymer of Maruoka modified by Spada which is identical to the polymer presently claimed.

23. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the tackifiers of Khieu in the amount taught by Khieu in the adhesive of Maruoka as modified by Spada and McLaughlin, motivated by the desire to provide the adhesive with necessary bond maintaining property and tackiness.

24. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,239,037 B1) and McLaughlin et al. (US 6,365,793B1) as applied to claims 1 and 7 above, and further in view of Everaerts et al. (US 5,612,136)**.

25. Maruoka is silent as to teaching claim 10.

26. However, Everaerts discloses a method of bonding PSA tape to acid-resistant automotive paints (abstract), which is interpreted to read on applicant's method of bonding an adhesive tape to automotive finishes.

27. While Maruoka does not explicitly teach aforementioned method, it is noted that Maruoka's adhesive tape is excellent in blister resistance, adhesive strength, and it is removable (see column 2 lines 65-67 to column 3 lines 1-5). Additionally, at column 1 lines 28-31, Maruoka discloses that PSA sheets can be applied to substrates such as metals, plastics etc.

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the adhesive tape of Maruoka in the method of bonding an adhesive tape to automotive finishes, motivated by the desire to use the adhesive tape having excellent adhesiveness and removability.

(10) Response to Argument

Argument A

29. Appellants argue that *a prima facie* case of obviousness cannot be established because at the time of the invention, a skilled artisan could not have reasonably expected that the specifically claimed crosslinker would have worked with the specifically claimed polymer in order to produce a satisfactory pressure sensitive adhesive (PSA) (see brief page 4 second full paragraph). To support these arguments,

appellants have submitted 37 C.F.R. Section 1.132 declaration by Dr. Marc Husemann ("the Husemann declaration") on 06/21/2010. Appellants are further asserting that the Examiner has not given proper weight to said declaration (see brief pages 5-6).

30. In response, the Examiner respectfully submits following: it is noted that the Husemann declaration states that one of ordinary skill in the art understands that polar polymers should be crosslinked with the polar crosslinking agents and apolar polymers should be crosslinked with apolar crosslinking agents (see page 2 section 4 of the Husemann declaration). Further, the Husemann declaration states "Due to the difference in polarity, it was expected that a combination of the claimed monomer combination and aluminum (III) acetylacetonate could not be crosslinked homogeneously and would not be suitable as a pressure sensitive adhesive. Surprisingly, however, the adhesive did achieve a sufficiently homogeneous crosslink." (see page 2 section 5 of the Husemann declaration). Additionally, the Husemann declaration states "Furthermore, at the time of the invention, a person of ordinary skill in the art would have expected the combination of apolar polymer and a polar crosslinking agent to exhibit an increase in wetting surface of the adhesive. An increase in the wetting surface would result in an adhesive having permanent adhesion, not suitable for removability. It was therefore surprising that the presently claimed adhesive exhibited low wetting behavior, and was able to be easily removed from a surface." (see page 2, sections 6-7 of the Husemann declaration).

31. However, the Examiner notes that appellants have not provided any factual evidence on the record (i.e. data) to support their assertion that "Surprisingly, however, the adhesive did achieve a sufficiently homogeneous crosslink." and "It was therefore surprising that the presently claimed adhesive exhibited low wetting behavior, and was able to be easily removed from a surface." Appellants assert that they do not have to provide data showing unexpected results since they are not trying to overcome the obviousness rejection of record by showing of unexpected results; instead they are attempting to establish a level of ordinary skill in the art at the time of the invention (see brief page 6 second full paragraph). However, the Examiner respectfully notes that while appellants may be attempting to establish a level of ordinary skill in the art; the statements made in the Husemann declaration actually raise an issue of unexpected results for which there is no factual evidence provided by appellants. The Examiner respectfully submits that the arguments of consul cannot take the place of evidence in the record (see MPEP 716.01(b)). Further, it is well settled that affidavits or declarations having conclusory statements such as that presented in the Husemann declaration are entitled little weight because of lack of factual support (MPEP 716.01(b)). Accordingly, appellants' arguments are not found persuasive.

Argument B

32. Appellants further argue that the Examiner has not provided any articulated reasoning with a rationale underpinning to support the rejection of the claims under 35 U.S.C. §103(a). According to appellants, "To support the rejections of claims under 35 U.S.C. §103(a), the Examiner only offers an overly broad statement that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to add aluminum (Iil) acetylacetonate crosslinker as taught by McLaughlin in the acrylic PSA of Maruoka as modified by Spada, motivated by the desire to provide PSA with suitable cohesiveness, and given that Maruoka desires crosslinkers…The Examiner's rationale for rejecting...The Examiner failed to provide any articulated reasoning sufficient evidence..." (see brief pages 7-8).

33. The Examiner respectfully disagrees. Specifically, the Examiner's fact-based articulated reasoning with the rationale to combine McLaughlin with Maruoka as modified by Spada is clearly set forth on page 5 sections 14-16 of Final Office action (FOA) mailed on 03/04/2010. This articulated reasoning from the aforementioned FOA is reproduced below for convenience.

14. As to claim limitation of teaching aluminum (III) acetylacetonate crosslinker, while Maruoka at column 10 lines 33-34 discloses "Agents to crosslink the adhesive composition may also be added to the composition according to desire", Maruoka is silent as to teaching the aforementioned crosslinker.

15. However, McLaughlin discloses a PSA tape. Further, at column 7 lines 5-10, McLaughlin discloses a thermally crosslinked acrylic adhesive that includes metal chelate such as aluminum acetylacetonate.

16. Based on the above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add aluminum (III) acetylacetonate crosslinker as taught by McLaughlin in the acrylic PSA of Maruoka as modified by Spada, motivated by the desire to provide PSA with suitable cohesiveness, and given that Maruoka desires crosslinkers.

34. Based on the above, appellants' arguments are not found persuasive.

Argument C

35. With respect to the art rejections of claims 8 and 16, claims 5 and 13-15, and claim 10, appellants have incorporated same arguments (see brief pages 9-10) that are set forth previously under "Argument A" and "Argument B". In response, the Examiner

has nothing more to add but to incorporate his rebuttal as set forth previously under "Argument A" and "Argument B' here by reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/A. D./

Examiner, Art Unit 1788

Conferees:

/Callie E. Shosho/

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